

## **DETAILED ACTION**

### ***Claim Objections***

1. This application is in condition for allowance except for the following formal matters:

Claims 15 and 16 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claims 15 and 16 recite electrode normalized thickness ranges of: "about 1.2% to about 8.5%" and "about 1.9% to about 6.6%", which are broader than the "about 3.0% to about 5.0% normalized thickness" recited within claim 10, from which they depend from.

### ***Allowable Subject Matter***

2. Claims 10, 12-14, and 18 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding independent claim 10, the prior art of record fails to teach or suggest a surface acoustic wave sensor comprising: a rotated Y-cut LiTaO<sub>3</sub> substrate having Euler angles of (0°, 120° to 140°, 0° ± 5°); electrodes, principally containing Au, and arranged on the LiTaO<sub>3</sub> substrate to excite a surface acoustic wave; and a reaction membrane, bound to a target substance, covering the electrodes arranged on the LiTaO<sub>3</sub> substrate; wherein the electrodes have a normalized thickness of about 3.0% to about 5.0%, the

normalized thickness being determined by normalizing the thickness of the electrodes by the wavelength of the surface acoustic wave; the surface acoustic wave element is a resonator type surface acoustic wave element; and the electrodes include at least one interdigital electrode and reflectors arranged on both sides of the at least one interdigital transducer in a direction of propagation of a surface acoustic wave.

### ***Conclusion***

3. Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 25 USPQ 74, 453 O.G. 213, (Comm'r Pat. 1935).

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT EOM whose telephone number is (571)270-7075. The examiner can normally be reached on Mon.-Thur., 9:00am-5:00pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571)272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Primary Examiner, Art Unit 1797

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